



SN 09/745,780

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Martin Ceredig Roberts et al.

Examiner: Neal Berezny

Serial No.: 09/745,780

Group Art Unit: 2825

Filed: December 21, 2000

Docket: 303.451US6

Title: METHOD FOR FORMING AN INTEGRATED CIRCUIT INTERCONNECT
USING A DUAL POLY PROCESS

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RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents
Washington, D.C. 20231

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Response
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1-22-03

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on September 27, 2002, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 38 - 45, 47 - 52, 54 - 59, 62 - 65 and 68 - 79 are now pending in this application.

Double Patenting Rejection

Claims 38-45, 47-52, 54-59, 62-65, and 68-79 were rejected under the judicially created doctrine of obviousness double patenting over claims 1-19 of U.S. Patent No. 5,923,584.

Applicant has enclosed herewith a Terminal Disclaimer herewith in order to facilitate immediate allowance of the application in view of the arguments made below to overcome the obviousness rejection.

§103 Rejection of the Claims

Claims 38-45, 47-52, 54-59, 62-65, and 68-79 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nihira et al. (U.S. Patent No. 4,908,324).

The current Office Action again rejects the pending claims based solely upon the Nihira et al patent, and providing modifications and additions to the grounds of rejection by frequent taking of "Official Notice" which, though they are neither repeated nor explicitly incorporated into the current Office Action, are still apparently relied upon in view of the statement at page 5, paragraph 8, line 7 -8: "Applicant's attention is directed to each of the Official Notice statements,

which contain motivational statements to modify the reference, see MPEP 2143".

The current Office Action contends that the providing of additional references in response to the Applicants' timely demand for substantiation of the "Official Notice" does not convert the single reference rejection to one based on a combination of multiple references. Applicants respectfully traverse the contention at the end of paragraph 8 to the effect that "there is no requirement that these references must be combined" as unsupported by substantive law.

There is no difference in principle between an obviousness rejection initially supported by combining the teachings of a plurality of references and one based upon a single reference with the missing elements supported by additional patents evidencing elements or modifications originally provided by the Examiner taking Official Notice. In either case, the law requires the Office Action to show a reason to combine references relied upon to support an obviousness rejection. Failure to show such a "motivation to combine" means that the rejection is defective since Office Action has not made out a *prima facie* case of obviousness.

Applicant hereby incorporates by reference the arguments made in the Amendment mailed September 5, 2002 at pages 8 through 11. The assertion in the current Office Action that there is no need to consider those references as being combined is unsupported and no showing of evidence of a motivation to combine the various teachings to support the rejection has been provided. Reconsideration and withdrawal of the rejection is respectfully requested.

The Office Action has not shown where every element of the claims is alleged to be found in Nihira et al (or the other three patents cited to support areas where Official Notice was taken

Even if one were contend that the Office Action provided evidence demonstrating a motivation to combine the various "teachings" of Nihira with the elements supported by Official Notice and/or supplemental references, the Rejection has still not provided a showing that each and every element of each claim is obvious in view of the prior art. Set forth below on a claim-by-claim basis is a listing of an exemplary element in each claim which is not described in the proposed combination of references described in the Office Action. While there are additional elements of the claims not covered in the rejections, the showing of exemplary examples

demonstrates that the rejection is unsupported and the claims are allowable.

Claim 38

Applicant also respectfully submits that Nihira does not show a structure where “the second polycrystalline layer overlies the first polycrystalline layer” as claim 38 requires.

Applicant understands that the Office Action relies upon el. 9 of Nihira as a “first polysilicon layer” and el. 11 as a “second polysilicon layer,” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where the second polysilicon layer overlies the first polysilicon layer.

Claims 39, 40, 41, 47

Applicant also respectfully submits that Nihira does not show a structure where an etch stop layer is “overlying the first polycrystalline silicon layer” and there is a second polycrystalline silicon layer which is “overlying the etch stop layer and the first substrate region as claims 39, 40, require. Applicant understands that the Office Action relies upon el. 9 of Nihira as a “first polysilicon layer” and el. 11 as a “second polysilicon layer,” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where the second polysilicon layer overlies an etch stop layer and the first substrate region as claims 39 and 40 require.

Claims 42 and 43

Applicant also respectfully submits that Nihira does not show a structure where there is a photoresist mask “overlying the first polycrystalline silicon plug” and there is a polycrystalline silicon plug which is “overlying the first substrate region” as claims 42 and 43, require.

Applicant understands that the Office Action relies upon el. 9 of Nihira as a “polysilicon layer” and el. 11 as the “polysilicon plug,” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where a photoresist mask overlies the first polysilicon plug and the polysilicon plug overlies a first substrate region as claims 42 and 43 require.

Claim 45

Applicant also respectfully submits that Nihira does not show a structure where a polycrystalline silicon plug is “overlying the first substrate region” as claim 45 requires. Applicant understands that the Office Action relies upon el. 9 of Nihira as a “first polysilicon layer” and el. 11 as a “second polysilicon layer (or the polycrystalline silicon plug?),” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where a polycrystalline silicon plug the first substrate region as claim 45 requires.

Claims 48, 49, 50

Applicant also respectfully submits that Nihira does not show a structure where an etch stop layer is “overlying the first polycrystalline silicon layer” and there is a polysilicon silicon plug which is “overlying the first substrate region” as claims 48, 49 and 50 require. Applicant understands that the Office Action relies upon el. 9 of Nihira as the “first polysilicon layer” and el. 11 as the “second polysilicon layer (the polysilicon plug?),” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where the etch stop layer overlies the first substrate region and the polysilicon plug overlies the first substrate region as claims 48, 49 and 50 require.

Claims 51 and 52

Applicant also respectfully submits that Nihira does not show a structure where an etch stop layer is “overlying the polycrystalline silicon plug” and there is a polycrystalline silicon plug which is “overlying the first substrate region” as claims 51 and 52 require. Applicant understands that the Office Action relies upon el. 9 of Nihira as the “first polysilicon layer” and el. 11 as the “second polysilicon layer (the polycrystalline silicon plug?),” as shown in Fig. 8f. As can be seen in Figure 8f and confirmed by the specification, Nihira does not show or suggest a structure where an etch stop layer overlies a polycrystalline silicon plug and the polycrystalline silicon plug overlies first substrate region as claim 51 requires.

Dependent claims

Each of the dependent claims is patentable for the same reasons as the underlying independent claims.

Conclusion

The rejection made in the current Office Action is defective since it has not shown a motivation for combining the various elements taken from the prior art to support the rejection. Even if there were a showing that the references relied upon could be combined, the current Office Action has not shown how such a combination would cover all elements of each of the claims. Reconsideration and withdrawal of the rejection and allowance of all of the pending claims is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6970 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date

December 27, 2002

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 27th day of December, 2002.

Name

Dawn M. Poole

Signature

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